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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,848	01/25/2002	Kaj Borge Hansen	45900-000720/US	1575
30593	7590	05/27/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			NI, SUHAN	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2643	9

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,848

Applicant(s)

HANSEN ET AL.

Examiner

Suhan Ni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This communication is responsive to the communication filed 02/09/2004.

***Specification***

2. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

**Arrangement of the Specification:**

The following order or arrangement is preferred in framing the specification and, except for the reference to the drawings, each of the lettered items should appear in upper case, without underling or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-Reference to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc (see 37 CFR 1.52(e)(5)).
- (e) Background of the Invention.
  1. Field of the Invention.
  2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.

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- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing, if on paper (see 37 CFR 1.821-1.825).

***Content of Specification***

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Reference to a "Microfiche Appendix": See 37CFR 1.96(c) and MPEP § 608.05, if the application was filed before March 1, 2001. The total number of microfiche and the total number of frames should be specified. Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc and an incorporation by reference of the material on the compact disc.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable

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U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known

in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims.
- (k) Drawings: See 37 CFR 1.81, 1.83-1.85, and MPEP § 608.02.
- (l) Sequence Listing, if on paper: See 37 CFR 1.821-1.825.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to **a single paragraph on a separate sheet** within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means"

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and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 38 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 38 and 47, both recite the exemplary limitation of "such as a flexprint" in line 2, which is indefinite since it is not clear what the limitation is.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 28-38 and 43-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerlach et al. (U. S. Pat. - 1,934,184).

Regarding claim 28, Gerlach et al. disclose an electroacoustic transducer, comprising: a magnetic circuit (Fig. 1) of a magnetically conductive material with a pair of opposed surfaces defining a gap therebetween, the magnetic circuit comprising a magnet inducing a magnetic field in the gap, the magnet having a surface constituting one of the opposed surfaces; a substantially plane diaphragm (8); and a coil (6) having electrically conducting paths secured to the substantially plane diaphragm, the coil having portions of its paths situated in the gap, wherein the magnetically conductive material defines magnetic return paths between the pair of opposed surfaces, said magnetic return paths extending in a plane being substantially parallel to the substantially plane diaphragm as claimed.

Regarding claim 29, Gerlach et al. further disclose the electroacoustic transducer, wherein the magnetic circuit has two pairs of opposed surfaces defining first and second gaps (Fig. 1), wherein the coil has first and second gap portions of its paths situated in respective ones of the first and second gaps, and bridging portions (7) of paths interconnecting the first and second gap portions of paths, the coil being secured to the substantially plane diaphragm at the bridging portions (Fig. 2).

Regarding claim 30, Gerlach et al. further disclose the electroacoustic transducer, wherein each pair of opposed surfaces are substantially plane surfaces being substantially parallel to each other (Fig. 1).

Regarding claims 31-34, Gerlach et al. further disclose the electroacoustic transducer, wherein the magnetic circuit comprises a body of magnetically soft material with two openings therein (Figs. 1 and 4) as claimed.

Regarding claims 35-36, Gerlach et al. further disclose the electroacoustic transducer, wherein the bridging portions define a bridging plane (Figs. 2-3) having a substantially flat



surface for securing the coil to the substantially plane diaphragm, and wherein each of the gap portions comprises a plurality of electrically conducting segments being substantially parallel to the bridging plane as claimed.

Regarding claims 37-38, Gerlach et al. further disclose the electroacoustic transducer, wherein the coil (6) is formed by wounded electrically conducting wire (15).

Regarding claim 43, Gerlach et al. disclose an electroacoustic transducer, comprising a magnetic circuit (Fig. 1) comprising a magnet inducing a magnetic field in a gap; a substantially plane diaphragm (Figs. 2-3) comprising electrically conductive portions; and a coil (6) secured to the substantially plane diaphragm, wherein the coil comprising electrically conducting path ends electrically connected to the electrically conductive portions of the substantially plane diaphragm, and the electrically conductive portions further having externally accessible portions (23) for electrically terminating the transducer as claimed.

Regarding claims 44-45, Gerlach et al. further disclose the electroacoustic transducer, wherein the coil comprises bridging portions defining a bridging plane having a substantially flat surface for securing the coil to the diaphragm, and a gap portion outside the bridging plane, the gap portion comprising a plurality of electrically conducting segments being substantially parallel to the bridging plane.

Regarding claims 46-47, Gerlach et al. further disclose the electroacoustic transducer, wherein the coil (6) is formed by wounded electrically conducting wire (15) as claimed.

Regarding claims 48-50, Gerlach et al. further disclose the electroacoustic transducer, wherein the magnetic circuit has two pairs (Figs. 4-5) of opposed surfaces defining first and second gaps, wherein the coil has first and second gap portions of its paths situated in respective ones of the first and second gaps, and bridging portions (Fig. 3) of paths interconnecting the first

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and second gap portions of paths, the coil being secured to the diaphragm at the bridging portions as claimed.

Regarding claims 51-54, Gerlach et al. further disclose the electroacoustic transducer, wherein the magnetic circuit (Fig. 1) comprises a body of magnetically soft material with two openings therein as claimed.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 39-42 and 55-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach et al. (U. S. Pat. - 1,934,184).

Regarding claims 39-42 and 55-58, Gerlach et al. do not clearly teach a casing for the transducer as claimed. Since providing a casing for a acoustic transducer is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide a suitable housing for the transducer, in order to protect the transducer and make the transducer more durable.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the


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number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

Suhan Ni  
Patent Examiner  
Art Unit 2643  
USPTO

05/21/2004

  
**SUHAN NI**  
**PRIMARY EXAMINER**